

WHAT IS CLAIMED IS:

1. A foldable truss assembly comprising a plurality of wall members, the wall members having a first and second receiving member, each receiving member capable of receiving an attachment member of at least one foldable end cap, the foldable end cap comprising:

a plurality of elongated arm members, each arm member having a first and second end;

a plurality of end bars, each end bar having a corner member disposed at ends thereof;

a plurality of pivoting members, each pivoting member pivotally connecting an arm member and an end bar, the arm members and end bars being connected by the pivoting members forming a closed loop;

a plurality of attachment members capable of being inserted into an interior space of the corner members of the end bars; and

a fastening mechanism fixedly attaching the arm members to the end bars, the fastening mechanism providing relative rotation between an arm member and an adjacent arm member.

2. The truss assembly according to claim 1, wherein the fastening mechanism comprises hinge brackets disposed on ends of the end bars, the hinge brackets cooperatively engaging ends of the arm members.

3. The truss assembly according to claim 2, wherein the fastening mechanism further comprise a nut, a bolt and a plurality of washers for securing

arm members to end bars and restricting relative motion of the wall members of the truss assembly.

4. The truss assembly according to claim 1, wherein each of the arm members further comprise a plurality of fastening holes and the end bars comprising pivot members disposed upon the corner members at ends of the end bars, the pivot members pivotally joining the arm members to the end bars.

5. The truss assembly according to claim 1, wherein the attachment members protrude from a side of the end cap.

6. The truss assembly according to claim 1, wherein the wall members comprise two elongated support members and a cross member fixedly connected between the support members.

7. The truss assembly according to claim 1, wherein the at least one end cap comprises two end caps, the plurality of wall members having first and second receiving members at opposing ends of the wall members, and the attachment members of one end cap being received into the receiving members on opposing ends of the wall members, and portions of the wall members being received into interior spaces of corner members of another end cap.

8. A foldable truss assembly comprising a plurality of wall members having a first and second receiving member, each receiving member capable of

receiving an attachment member of a foldable end cap, the foldable end cap comprising:

a plurality of elongated arm members, each arm member having a first and second end;

a plurality of end bars, each end bar having a corner member disposed at ends thereof; and

a plurality of swiveling mechanisms disposed on the corner members of the end bars, each swiveling mechanism pivotally joining an end of an arm member and an end of an end bar, the arm members being connected to the end bars forming a closed loop.

9. The truss assembly according to claim 8, wherein each of the arm members further comprise pivot holes at the first and second ends, the swiveling mechanism passing through the pivot holes of an arm member to join the arm member to an end bar.

10. The truss assembly according to claim 8, wherein the wall members comprise two elongated support members and a cross member fixedly connected between the support members.

11. The truss assembly according to claim 8, wherein the at least one end cap comprises two end caps, and portions of the wall members are received into interior spaces of corner members of the two end caps.

12. A method of assembling a foldable truss member, comprising:

unfolding at least one end cap, the end cap comprising a plurality of arm members and a plurality of end bars, the arm members being adjacently connected to the end bars forming a closed loop, each arm member being pivotally connected to each adjacent end bar;

attaching a plurality of wall members to the end cap; and

adjusting a fastening mechanism to lock the arm members and the end bars into relative proximity.

13. The method according to claim 12, further comprising attaching a cross brace between diagonal corners of two of the wall members to stabilize the wall members.

14. The method according to claim 12, further comprising attaching a pair of bracing elements between opposing corners of two wall members to stabilize the wall members.

15. A method of assembling a foldable truss member, comprising:  
unfolding a pair of end caps, the end caps comprising a plurality of arm members and a plurality of end bars, the arm members being adjacently connected to the end bars forming a closed loop, each arm member being pivotally connected to each adjacent end bar;  
attaching the end caps to opposing ends of a plurality of wall members;  
and  
adjusting fastening mechanisms to lock the arm members and the end bars into relative proximity.

16. The method according to claim 15, further comprising attaching a cross brace between diagonal corners of the two end caps to stabilize the wall members.

17. The method according to claim 15, further comprising attaching a pair of bracing elements between opposing corners of the two end caps to stabilize the wall members.

18. A foldable truss assembly comprising a plurality of wall members, the wall members capable of receiving an attachment means of at least one foldable end cap, the foldable end cap comprising:

a plurality of elongated arm members;

a plurality of end bars;

a plurality of pivot means, each pivot means pivotally connecting an arm member and an end bar, the arm members and end bars being connected by the pivot means forming a closed loop;

a plurality of attachment means being disposed on corner members of the end bars; and

a fastening means fixedly attaching the arm members to the end bars, the fastening means preventing relative rotation between an arm member and an adjacent arm member.

19. The truss assembly according to claim 18, wherein the fastening means comprises brackets disposed on ends of the end bars, the brackets cooperatively engaging ends of the arm members.

20. The truss assembly according to claim 18, wherein the fastening means further comprise a nut, a bolt and a plurality of washers for securing arm members and end bars and restricting relative motion of the wall members of the truss assembly.

21. The truss assembly according to claim 18, wherein each of the arm members further comprise a plurality of fastening holes for joining the arm members to the end bars.

22. The truss assembly according to claim 18, wherein the attachment means protrude from a side of the end cap.

23. The truss assembly according to claim 18, wherein the wall members comprise two elongated support members and a cross member fixedly connected between the support members.

24. The truss assembly according to claim 18, wherein the at least one end cap comprises two end caps, the plurality of wall members having a first and second receiving member at opposing ends of the wall member, and the attachment means of one end cap being received into the receiving members on opposing ends of the wall members, and portions of the wall members being received into attachment means of another end cap.